

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FORESTRY
NORTHERN REGION

FAIRBANKS AREA

FOREST LAND USE PLAN

Flat Birch #1
NC-954-F

ADL 415200

February 2010

Prepared by: Jeremy Douse CF
Resource Management Forester

Table of Contents

I. INTRODUCTION	1
A. Purpose.....	1
B. Five-Year Sale Schedule	1
C. Location	1
D. Title, Classification and Other Active or Pending Interests	1
E. General Timber Sale Program Objectives	2
II. LEGAL AUTHORITY	2
III. ADMINISTRATIVE RECORD	2
IV. DISCUSSION OF ISSUES.....	2
A. Physical Characteristic of the Sale Area.....	2
B. Historic and Current Land Use	3
C. Wildlife Habitat.....	3
D. Fisheries and Water Quality	3
E. Subsistence.....	4
F. Recreation and Tourism.....	4
G. Scenic Resources	4
H. Cultural Resources.....	4
I. Sustained Yield and Allowable Cut.....	4
J. Silvicultural Prescription	5
K. Transportation	6
L. Erosion	6
M. Mining.....	7
N. Materials	7
O. Economics	7
V. MARKET CONDITIONS.....	7
VI. ALTERNATIVE ACTIONS.....	7
VII. PRELIMINARY FINDING AND DECISION.....	8

I. INTRODUCTION

A. Purpose

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information for reviewers to ensure that the best interest of the State will be served by the Department of Natural Resources, Division of Forestry, Fairbanks Area, offering this proposed timber sale. This FLUP deals with site specific considerations of the sale. The boundaries and precise volume of the sale may be refined if and when the sale is developed. Site specific research has been completed on title considerations, land classifications, applicable land management plans, appropriate silvicultural techniques, regulatory and statutory requirements, and physical conditions that apply to the proposed sale area. The proposal is for the harvest of approximately (+/- 30%) 37 acres of land that is predicted to yield approximately (+/- 30%) 8,000 CF of spruce and 43,000 CF of birch. The sale design may be altered to mitigate potential conflicts. It will be the responsibility of the Forester-In-Charge to ensure that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to Alaska Forest Resources and Practices Act (AFRPA) best management practices.

The public is invited to comment on any aspect of this proposed timber sale with regards to the Preliminary Finding and Decision (AS 38.05.035). Comments should be mailed to the Division of Forestry, 3700 Airport Way, Fairbanks, Alaska 99709 or by email at jeremy.douse@alaska.gov. Comments must be received at the Division of Forestry no later than March 8th 2010 in order to be considered in the Final Decision of whether the sale will be held in whole or in part. To be eligible to appeal the final decision, a person must have provided written comment by March 8th 2010.

B. Five-Year Sale Schedule

The general area and timber type that this proposed sale occupies has been shown as a potential sale area in the current Five-Year Schedule of Timber Sales (FYSTS) for Fiscal Years 2010-2014 as required by AS 38.05.113. It has been listed in previous schedules.

C. Location

The proposed sale is located 17 miles northeast of Fairbanks and roughly 4 miles northwest of Pleasant Valley, within the Fairbanks North Star Borough and within the boundaries of the Doyon Region. Coastal Zone Management considerations do not apply. The proposed sale area is located within Section 14 and 15 Township 1 North Range 3 East, Fairbanks Meridian. The sale area is shown on the attached map and is within the United States Geological Survey 1:63,360 Quadrangle map titled Fairbanks D-1. The tract is accessed from Fairbanks by driving east on the Chena Hot Springs Road to milepost 18. At this point turn north on the Two Rivers road and drive 4.4 miles to an intersection. At the intersection, Turn left (northwest) and drive 1.4 miles down to the start of the proposed access road. The proposed access is a spur road to the western boundary of the sale. The length of new spur road construction is approximately 0.3 miles.

D. Title, Classification and Other Active or Pending Interests

The acquisition for the land upon which the sale is proposed is based on General Selection 11. The title was transferred by Patent 50-65-0217. There are no title restrictions on the area. The primary land classification for the area is Forestry per Classification Order NC-82-065. The proposed sale area is within Unit 6 of the Tanana Valley State Forest (TVSF).

E. General Timber Sale Program Objectives

1. **Develop the State's Renewable Resources.** To follow the DNR's constitutional mandate to encourage the development of the State's renewable resources, making them available for maximum use consistent with the public interest. Sustain and promote a healthy, long-term timber industry in the State, through providing a secure source of timber for harvest that produces raw materials for local manufacturing plants when practical while protecting other resources such as fish and wildlife.
2. **Improve the State's Economy.** To help the State's economy by providing royalties to the State in the form of stumpage receipts, as well as contributions to local economies through wages, purchases, jobs and business.
3. **Improve Forest Health.** To improve forest growth and vigor by harvesting and replacing mature stands and stands with declining vigor with new healthy regenerating stands, while protecting and maintaining other resource values. The actions authorized under this decision will follow the constitutional mandate of sustained yield and shall adhere to multiple use management as described in the TVSF Management Plan.
4. **Improve Wildlife Habitat.** Meet the statutory wildlife management objective for the TVSF (AS 41.17.400(e)) that provides for the production of wildlife for a high level of sustained yield human use through habitat improvement techniques, while allowing for timber management and other beneficial uses of public land and resources.

II. LEGAL AUTHORITY

This Division of Forestry is taking this action under the authority of AS 38.05.035 (e) (Best Interest Finding); AS 38.05.110-120 (Alaska Land Act Statutes); 11 AAC 71 (Timber Sale Statutes and Regulations); AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations).

III. ADMINISTRATIVE RECORD

The case file ADL 415200 and the Tanana Valley State Forest Management Plan constitute the administrative record for this finding.

IV. DISCUSSION OF ISSUES

A. Physical Characteristic of the Sale Area

1. **Topography.** The site is on a southwest facing moderately sloping hill to the east of the Little Chena River. Elevation ranges from 800 feet to about 950 feet. The terrain is interspersed with hogbacks of varying directions with an average grade of 12 to 15 percent.
2. **Soils.** Soils in unit 1 of this sale area are classified as a Steese-Gilmore complex and unit 2 as Saulich peat soils. Steese and Gilmore soils are productive upland silt loam soils that have formed in loess deposits. Fractured schist underlies these soils at levels between 13 and 40 inches. Saulich peat soils are found on cold valley sides and are generally poorly drained.
3. **Water bodies.** There are no defined drainages within the proposed unit boundaries. The closest water body is the Little Chena River which is approximately 1.6 miles west of the sale boundary. The sale area presents no obstacles that would prevent implementation of the best management practices of the AFRPA to maintain water quality.

4. **Stand Conditions.** The timber stand and proposed harvest unit consists of 70 year old birch, and 125 year old white spruce. Birch occupies approximately 85% of the site and is showing some signs of defect to include stem rot and leaf roller. The spruce component which is primarily in unit 2 is an isolated pocket of saw timber showing some signs of budworm infestation. Understory vegetation includes high bush cranberry, rose and some alder. The moss depth in unit 1 is negligible and in unit 2 averages 3 inches. The grass component is moderate in this stand and is estimated to cover 15% of the area. Unit 1 has approximately 233 merchantable trees per acre. Basal area is 81 square feet/acre. Unit 2 has approximately 52 trees per acre and estimated basal area is 60 square feet/ acre.

B. Historic and Current Land Use

The historic uses of land in the general area have been logging, hunting, trapping, and general trail use. The current uses of the area are recreation, wood cutting, hunting and trapping. A bear baiting station was found within the boundary of the unit. Dog mushing and snow machine trails can be found in the area particularly in the valley bottom to the west of the sale and on the secondary road north of the sale. The proposed access route does not cross any currently used trails.

C. Wildlife Habitat

Wildlife typical of the interior are found here and during ground reconnaissance moose sign was observed. There are no known raptor nests within the proposed sale area. No critical wildlife habitat has been identified for this area (TVSF Management Plan), nor has any become apparent during ground reconnaissance.

Treatments proposed for this stand are projected to enhance habitat conditions for ruffed grouse, moose, voles, hares, and ultimately, lynx, marten and fox. In the past, Alaska Department of Fish and Game, Division of Wildlife Conservation have recommended managing for as much diversity as possible when prescribing harvest unit size, shape and position to mimic the results of wildfire or other stand replacement phases such as insect outbreaks or flood events. To accomplish these objectives snags will be retained to provide late-successional wildlife habitat for hole nesting birds, woodpeckers, small mammals, and other species requiring perching habitat. The unit will be laid out with an uneven edge, along and between timber types. This will create varied edge effect beneficial to many wildlife species.

D. Fisheries and Water Quality

Best management practices will be implemented to ensure water quality standards in all water courses. During review of the FY 2010-2014 FYSTS, the ADF&G, Division of Habitat did not have particular fish or wildlife concerns with the proposed road or harvest area. There is no expectation that this harvest will have negative impacts on the Little Chena or the main branch of the Chena River.

Approximately 1600 feet of new spur road construction will be required for this sale. Construction and maintenance of this road set to the BMP standards outlined in the

AFRPA will be required. Erosion within the unit will be mitigated by backfilling skid trails with debris and through the installation of water bars if necessary.

E. Subsistence

The tract has not been designated as a subsistence zone. The proposed sale of timber is anticipated to have no deleterious effects on subsistence activities. Subsistence activities of fishing, trapping, hunting and gathering of berries and other non timber forest products may occur on State owned lands.

F. Recreation and Tourism

Recreation use of this area is moderate, but not inconsistent with a timber sale. Primarily it consists of hunting and trapping activity, as well as some recreational snow machining, ATV riding and dog mushing. As was mentioned above, the valley bottoms to the west of the sale are used by snow machiners and dog mushers and bear baiters have used areas within the sale boundary. Other recreational trails exist south of the sale on Fairbanks North Star Borough land. Sufficient snow cover will be left on the roads to enable continued winter recreational use. Cross trails will be kept free of either snow filled or brush filled berms.

G. Scenic Resources

The sale is located in a relatively narrow upland valley. It will not be visible from the Chena Hot Springs Road. It will not be visible from the ridgeline trails, but may be visible from some valley bottom winter trails. Leave trees and residuals will somewhat obscure the harvest area and help blend the cut border with existing landscape.

H. Cultural Resources

The TVSF Management Plan does not list any historic cultural or archaeological sites in the vicinity of the proposed harvest. The State Office of History and Archaeology (OHA) do not list any sites on its inventory and had no comment during its review of the FY 2010-2014 FYSTS. During the course of activities associated with this timber sale, cultural and/or paleontological resources may be inadvertently discovered. Should such discovery occur, these sites shall be protected from further disturbance and OHA contacted immediately so that compliance with state laws governing cultural resources may begin.

Under the Alaska Historic Preservation Act (AS 41.35), all burials on state land are protected. If burials or human remains are found, all land altering activities that would disturb the burial or remains shall cease and measures taken to protect it in place. OHA and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

I. Sustained Yield and Allowable Cut

The Alaska Forest Resources and Practices Act (AS 41.17.060 (c)) and Article VIII Sec. 4 of the State Constitution require that the State forest land be managed on a sustained yield basis. Sustained yield is defined in the Alaska Forest Resources and Practices Act (AS 41.17.950(25)):

“Sustained Yield” means the achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of forest land and water without significant impairment of the productivity of the land and water, but does not require that timber be harvested in a non-declining yield basis over a rotation period.

The Annual Allowable Cut (AAC) is the amount that can be harvested from forest land managed for forestry purposes in a year under sustained yield management. The AAC in the Fairbanks Area is based on a ten-year average as determined by the Parsons and Associates, Inc. report titled “Tanana State Forestry Lands Periodic Sustained Yield Analysis”. This sale complies with sustained yield/allowable cut principles outlined in the Fairbanks Area Five-Year Schedule of Timber Sales for FY 2010-2014. The AAC for the Fairbanks Management Area is approximately 6,260 acres. The AAC will not be exceeded for this proposed sale.

J. Silvicultural Prescription

1. **Stand Silvics.** The normally merchantable species of trees here are white spruce and birch. Data and research on regeneration and growth characteristics of these species are compiled within the Resource Analysis of the Tanana Valley State Forest (TVSF) Management Plan. The harvest and reforestations systems available in Interior Alaska are also reviewed and listed in the Resource Analysis. The results of the public and agency discussions for harvest and reforestation are discussed in the TVSF Management Plan. Silvicultural harvest systems that facilitate even-aged (natural) management are generally preferred. They mimic the ecological impact of wildfire and other disturbances and result in the greatest increase in site productivity. Even-aged management is normally accomplished through clear cuts, patch cuts and heavy partial cuts (such as seed tree or shelterwood systems), which opens up the site to maximum solar gain. This results in the greatest production of both young hardwood that is important to wildlife and the spruce understory valuable years later as timber. Even-aged management techniques are utilized to provide young, vigorously growing stands in juxtaposition to older, undisturbed stands. Such placement of harvest units can optimize natural seedling and the edge effect. The proposed sale is a heavy partial cut harvest that will open the forest resulting in a strong vegetative response from birch in unit 1 and allow for planting of spruce in unit 2.

2. **Specific Management Objectives.**

Unit 1:

Utilize the current commercial value of this timber stand before stem rot and birch leaf roller inflicts further damage, and then return this site to a productive mixed forest at an equal or greater basal area than currently exists. The overall stand composition is 85% hardwood and 15% spruce. It is expected that the spruce component will occupy 30% of the stand from release of the advanced regeneration and by natural seeding. The objective is to maintain a birch component of 80% or better. Provide cover for wildlife and scenic resources by leaving small birch and spruce standing. Birch smaller than 6 inches and all white spruce would be reserved from harvest in Unit 1. It is reasonable to assume that these objectives will be realized under the recommended prescription with some supplemental planting of white spruce if necessary.

Unit 2:

Attempt to improve vigor by replacing the aging older white spruce with younger faster growing trees. Utilize the current commercial value of this timber stand. Attain a more natural diversity of forest age classes in the general area. Protect and where possible, enhance important wildlife and fish habitat. White spruce smaller than 9 inches and all birch would be reserved from harvest. Release the advanced white spruce regeneration from competition and promote faster growth. Open up the site to greater soil warming to decrease moss depth and increase productivity. Return the site to a productive naturally even-aged, mixed-species stand at an equal or greater basal area than currently exists. It is reasonable to assume that these objectives will be realized under the recommended prescription along with scarification and supplemental planting of white spruce.

3. **Harvest Methods.** The sale will be harvested by a clear-cut with reserves silvicultural system. All birch 6" DBH or larger in unit 1 and spruce 9" DBH or larger in unit 2 will be removed. Snags, birch smaller than 6" and white spruce smaller than 9" will not be cut. Residual trees will be protected from damage during harvest operations. Harvesting will be by the whole tree yarding system. Slash disposal at the landings will be by burning or by salvage for fuelwood use.
4. **Regeneration** Regeneration of birch occurs both from seed and coppice sprouting from stumps. Residual and adjacent birch will provide significant seed and will supplement the stocking of white spruce. Regeneration of white spruce occurs only from seeds. White spruce trees generally produce some level of seed crop every three to five years and large seed crops every five to seven years. Residual and adjacent spruce will provide a seed source. Under this harvest system, natural regeneration of white spruce and hardwoods should be increased due to increased light and soil warmth. A regeneration survey will be conducted three years after the planting effort. If the survey indicates inadequately stocked areas greater the ½ acre and totaling 3.7 acres then hand planting of white spruce seedlings or additional scarification will be performed on non-stocked areas. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre.

K. Transportation

The planned access to the proposed sale is by spur road extending from the existing primary road located north of Chena Hot Springs Road. The first 4.4 miles are along Two Rivers road which traverses through a residential area and then an FNSB wood cutting area. Once an intersection is reached at 4.4 miles, turn left (west) which leads to previous timber sale (ADL 416447). 1.5 miles past the intersection is the start of the access to the sale. New spur road is proposed to be constructed for 0.3 miles to the sale area from the two rivers logging road. The 5.9 miles of existing primary road will be maintained to the standards set out in the AFRPA. The 0.3 miles of new spur road will be constructed and maintained to the standards set out in the AFRPA.

L. Erosion

There are two soil erosion concerns: surface erosion and mass wasting of soil and debris. Road construction and poor maintenance of roads primarily causes surface erosion. To avoid erosion, debris will be placed back onto skid trails and water bars installed if necessary. Harvesting will be suspended during periods of thawing soil conditions to assure there is minimal soil disturbance. The location of skid trails will optimize skidding distances and provide for adequate landing areas. The other aspect of erosion (mass wasting and debris avalanches) normally occurs on slopes of more than 70 percent. In the area of the proposed timber sale slopes do not reach this grade.

M. Mining

This sub-unit of the TVSF has moderate mineral potential however; there are no mining claims within the sale area. More detailed information on subsurface resource use is found in the TVSF Management Plan. Other than providing access, and sharing some of the same access roads, this sale will have no impact on the potential mining resources or mining activity in this area.

N. Materials

No rock materials will be required for the construction of access roads.

O. Economics

In addition to generating royalties to the State's general fund, the proposed sale will create economic benefits to the Fairbanks North Star Borough and to other locations in Alaska. The Borough business community will receive direct economic benefits from providing support services for the operators through sales of fuel, food, housing, medical and miscellaneous supplies. The residents of the Borough will receive an indirect benefit through taxes paid to cities and the Borough by the operator and employees during the course of the timber harvest operation.

The sale is expected to benefit the local economy by providing jobs. It will have a positive impact on local employment by generating numerous man-hours of work associated with the harvest and transportation of wood products from this sale.

Additionally the public may benefit from access to additional personal use fuel wood areas.

V. MARKET CONDITIONS

Renewable heating fuels such as firewood are in high demand in interior Alaska to offset fluctuating oil prices. A market for biomass fuels for the creation of pellets and chips is also starting to emerge in the Fairbanks area. Fine particulate matter that leads to poor air quality is a concern for local regulatory agencies but wood energy is still seen as a critical component for local residents as new technologies emerge for more efficient wood and pellet stoves. Local logging operations are experiencing high demand for firewood and are in need of a reliable supply of timber to meet this demand. This sale is expected to contain timber well suited for lumber and fuel wood production.

The job market is still in poor condition and timber sales such as this create jobs in the forest products industry. Operators, drivers, mechanics and processors are needed to deliver firewood and wood products to local residents and industry.

VI. ALTERNATIVE ACTIONS

There are four possible alternatives to consider for this sale. A discussion of each of the four alternatives follows:

1. **To continue the sale(s) as proposed.**

This alternative meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking. This alternative also complies with the management objectives of the TVSF Management Plan for Unit 6.

2. **To modify the sale(s) by making them smaller or larger.**

The proposed sale unit is a logical setting for typical commercial logging equipment in Interior Alaska. The size of the sale is designed to be large enough to be economically viable considering access development and mobilization costs and distance to processing facilities. Sales of this size are appropriately balanced to maintain other resource values as well as provide economic benefits to the Tanana Valley.

3. **Defer the sale of this timber to a later date.**

Deferring harvest to a later date would fail to meet many of the objectives of the sale program. One of the main objectives is to make State-owned timber consistently available to the timber industry.

4. **Do not offer this timber for sale.**

This alternative would result in not meeting any of the objectives outlined for this management action. Utilization of the forest resource would not be achieved. There would be no significant contribution to the State and local economies. This alternative would delay the management objectives planned for the area, deny making a source of raw materials available to the local wood products industry, and would delay the harvest of mature trees, prior to the onset of disease or insect infestation. Decay in infected and infested mature spruce saw timber results in the loss of economic value.

VII. PRELIMINARY FINDING AND DECISION

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, will make available timber located in Sections 14 and 15 Township 1 North, Range 3 East, Fairbanks Meridian. After due consideration of all pertinent information and alternatives, the DNR has reached the following **Preliminary Decision: To offer the sale as proposed in Alternative 1.** In addition, the DNR finds that this preliminary decision satisfies the objectives as stated in this document and it is in the best interest of the State to proceed with this action.



Jeremy Douse CF
Resource Management Forester

2/3/10
(Date)